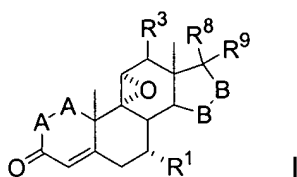


This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

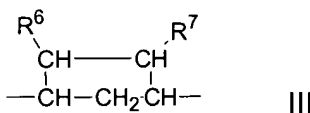
Claims 1-65. (cancelled).

Claim 66. (currently amended) A process for the formation of a compound of Formula I:



wherein -A-A- represents the group  $-\text{CHR}^4-\text{CHR}^5-$  or  $-\text{CR}^4=\text{CR}^5-$ ;

-B-B- represents the group  $-\text{CHR}^6-\text{CHR}^7-$  or an alpha- or beta-oriented group of Formula III:



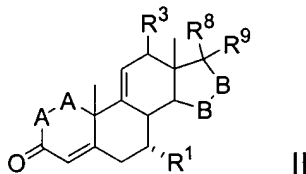
$\text{R}^1$  represents an  $\alpha$ -oriented lower alkoxycarbonyl or hydroxycarbonyl radical;

$\text{R}^3$ ,  $\text{R}^4$  and  $\text{R}^5$  are independently selected from the group consisting of hydrogen, halo, hydroxy, lower alkyl, lower alkoxy, hydroxyalkyl, alkoxyalkyl, hydroxy carbonyl, cyano, and aryloxy;

$\text{R}^6$  and  $\text{R}^7$  are independently selected from the group consisting of hydrogen, halo, lower alkoxy, acyl, hydroxyalkyl, alkoxyalkyl, hydroxycarbonyl, alkyl, alkoxy carbonyl, acyloxyalkyl, cyano, and aryloxy; and

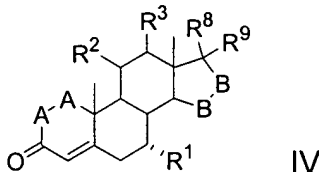
$\text{R}^8$  and  $\text{R}^9$  are independently selected from the group consisting of hydrogen, hydroxy, halo, lower alkoxy, acyl, hydroxyalkyl, alkoxyalkyl, hydroxycarbonylalkyl, alkoxy carbonylalkyl, acyloxyalkyl, cyano, and aryloxy, or  $\text{R}^8$  and  $\text{R}^9$  together comprise a carbocyclic or heterocyclic ring structure, or  $\text{R}^8$  or  $\text{R}^9$  together with  $\text{R}^6$  or  $\text{R}^7$  comprise a carbocyclic or heterocyclic ring structure fused to the pentacyclic D ring;

the process comprising converting a compound of Formula II to a compound of Formula I, said ~~contacting an epoxidizing reagent with a~~  
compound of Formula II having the structure:



wherein -A-A-, -B-B-, R<sup>1</sup>, R<sup>3</sup>, R<sup>8</sup> and R<sup>9</sup> are as defined above;

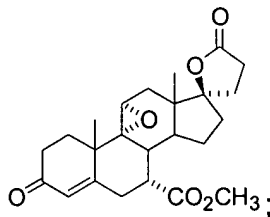
wherein said compound of Formula II is prepared by converting a compound of Formula IV to a compound of Formula II, said ~~removing an 11 $\alpha$ -leaving group from a~~ compound of Formula IV having the structure:



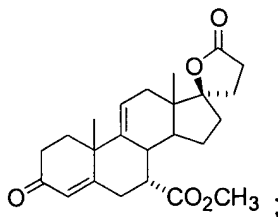
wherein -A-A-, -B-B-, R<sup>1</sup>, R<sup>3</sup>, R<sup>8</sup> and R<sup>9</sup> are as defined above, and R<sup>2</sup> is a leaving group the abstraction of which is effective for generating a double bond between the 9- and 11-carbon atoms.

Claim 67. (cancelled)

Claim 68. (previously presented) A process as set forth in claim 66 wherein said compound of Formula I is:



said compound of Formula II is:



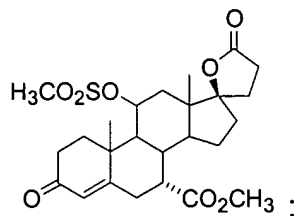
The chemical structure shows a steroid nucleus with several modifications: a methyl ester group ( $\text{CO}_2\text{CH}_3$ ) at C-17, a methyl sulfonate group ( $\text{H}_3\text{CO}_2\text{SO}$ ) at C-2, and a cyclopentanone ring fused at C-13 and C-14. The stereochemistry is indicated with a wedge bond at C-13 and a dashed bond at C-14.

Chemical structure of a steroid derivative. The structure features a four-ring steroid nucleus. Substituents include: A (on the left side chain), B (on the D-ring), R<sup>1</sup> (on the D-ring), R<sup>3</sup> (on the C-ring), R<sup>8</sup> and R<sup>9</sup> (on the D-ring), and a hydroxyl group (HO) on the C-ring.

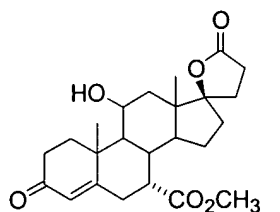
The chemical structure shows a steroid nucleus with a methyl ester group ( $\text{CO}_2\text{CH}_3$ ) at the 3-position and a cyclopentanone ring fused at the 17-position. The stereochemistry is indicated with wedges and dashes.

CCOC(=O)[C@H]1CC[C@@H]2[C@@]1(CC[C@H]3[C@H]2CC=C4[C@@]3(CC[C@@H](C4)C(=O)C)C)C

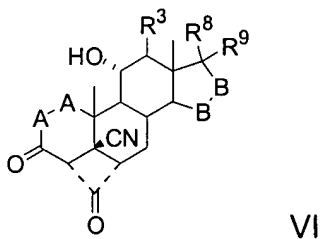
5



and said compound of Formula V is:



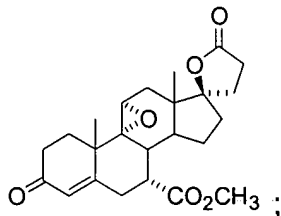
Claim 73. (currently amended) A process as set forth in claim 69 wherein the compound of Formula V is prepared by **converting reacting** a compound of Formula VI **to a compound of Formula V with an alkali metal alkoxide corresponding to the formula  $R^{10}OM$  wherein M is alkali metal and  $R^{10}O$  corresponds to the alkoxy substituent of  $R^4$** , said compound of Formula VI having the structure:



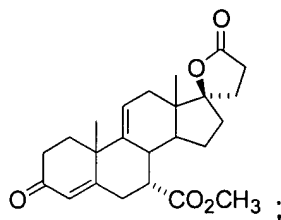
wherein -A-A-, -B-B-,  $R^3$ ,  $R^8$  and  $R^9$  are as defined in claim 69.

Claim 74. (cancelled)

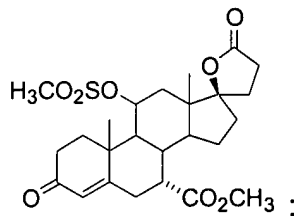
Claim 75. (previously presented) The process of claim 73 wherein said compound of Formula I is:



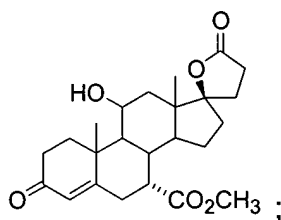
said compound of Formula II is:



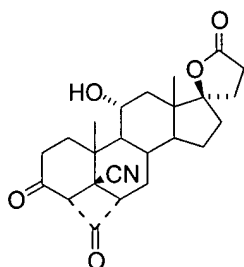
said compound of Formula IV is:



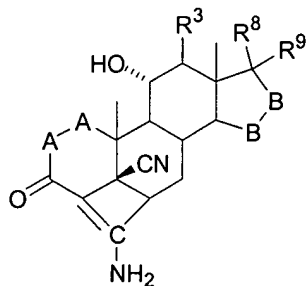
said compound of Formula V is:



and said compound of Formula VI is:



Claim 76. (currently amended) A process as set forth in claim 73 wherein the compound of Formula VI is prepared by **converting hydrolyzing** a compound of Formula VII **to a compound of Formula VI, said compound of Formula VII having the structure:**

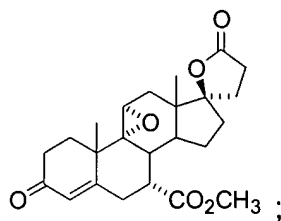


VII

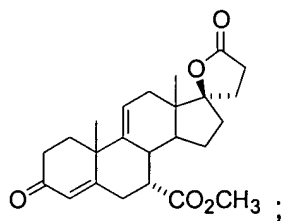
wherein -A-A-, -B-B-,  $R^3$ ,  $R^8$  and  $R^9$  are as defined in claim 73.

Claim 77. (cancelled)

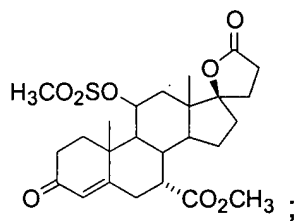
Claim 78. (previously presented) The process of claim 76 wherein said compound of Formula I is:



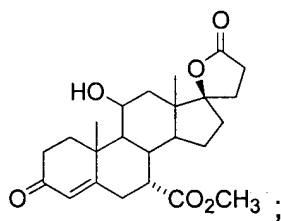
said compound of Formula II is:



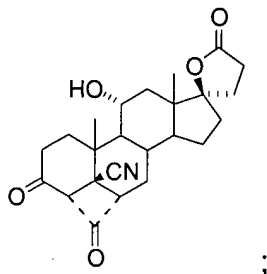
said compound of Formula V is:



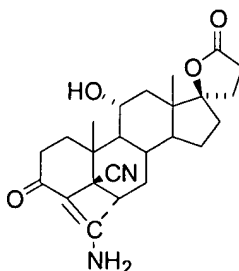
said compound of Formula V is:



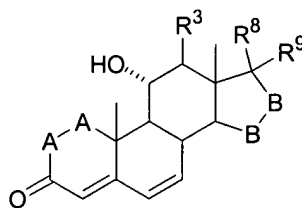
said compound of Formula VI is:



and said compound of Formula VII is:



Claim 79. (currently amended) A process as set forth in claim 76 wherein the compound of Formula VII is prepared by converting a compound of Formula VIII to a compound of Formula VII, said reacting a source of cyanide ion in the presence of an alkali metal salt with a compound of Formula VIII having the structure:

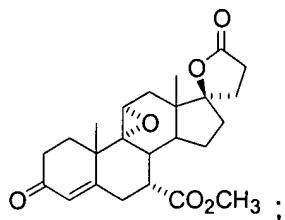


VIII

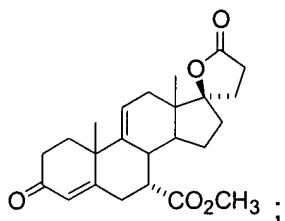
wherein -A-A-, -B-B-, R<sup>3</sup>, R<sup>8</sup> and R<sup>9</sup> are as defined in claim 76.

Claims 80. – 81. (cancelled)

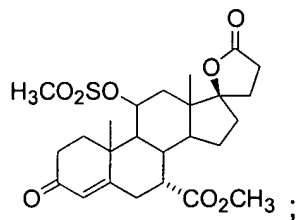
Claim 82. (previously presented) A process as set forth in claim 79 wherein said compound of Formula I is:



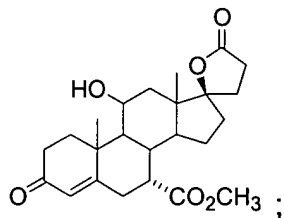
said compound of Formula II is:



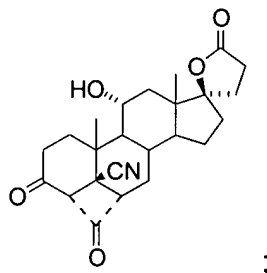
said compound of Formula IV is:



said compound of Formula V is:

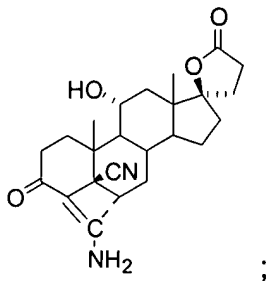


said compound of Formula VI is:

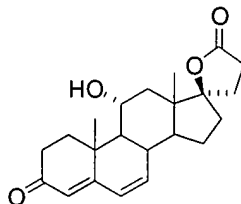


said compound of Formula VII is:

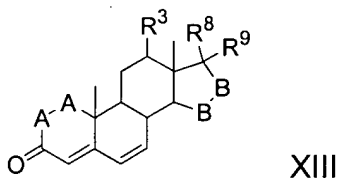




and said compound of Formula VIII is:



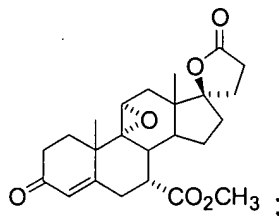
Claim 83. (currently amended) A process as set forth in claim 79 wherein the compound of Formula VIII is prepared by converting oxidizing a compound of Formula XIII to a compound of Formula VIII ~~by fermentation in the presence of a microorganism effective for introducing an 11-hydroxy group into said substrate in  $\alpha$ -orientation~~, said compound of Formula XIII having the structure:



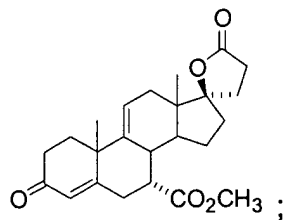
wherein -A-A-, -B-B-, R<sup>3</sup>, R<sup>8</sup> and R<sup>9</sup> are as defined in claim 79.

Claims 84. - 85 (cancelled)

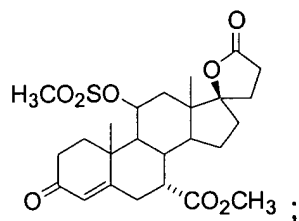
Claim 86. (previously presented) A process as set forth in claim 83 wherein said compound of Formula I is:



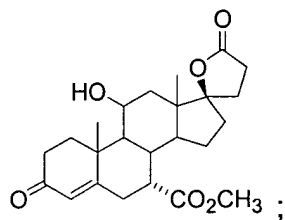
said compound of Formula II is:



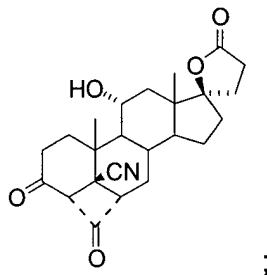
said compound of Formula IV is:



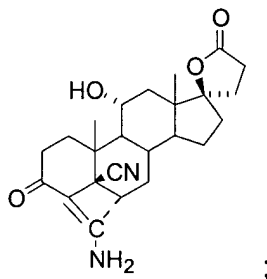
said compound of Formula V is:



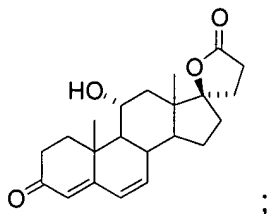
said compound of Formula VI is:



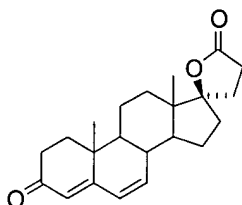
said compound of Formula VII is:



said compound of Formula VIII is:



and said compound of Formula XIII is:



Claims 87. – 93. (cancelled)

Claim 94. (new) A process as set forth in claim 66 wherein said conversion of a compound of Formula II to a compound of Formula I is effected by contacting an epoxidizing reagent with a compound of Formula II.

Claim 95. (new) A process as set forth in claim 66 wherein said conversion of a compound of Formula IV to a compound of Formula II is effected by removing an  $11\alpha$ -leaving group from a compound of Formula IV.

Claim 96. (new) A process as set forth in claim 69 wherein said conversion of a compound of Formula V to a compound of Formula IV is effected by reacting a lower alkylsulfonylating or acylating reagent or a halide generating agent with a compound of Formula V.

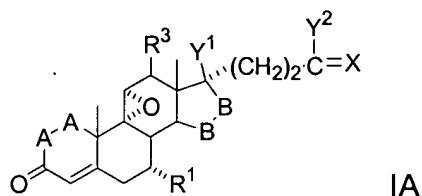
Claim 97. (new) A process as set forth in claim 73 wherein said conversion of a compound of Formula VI to a compound of Formula V is effected by reacting a compound of Formula VI with an alkali metal alkoxide corresponding to the formula  $R^{10}OM$  wherein M is alkali metal and  $R^{10}O^-$  corresponds to the alkoxy substituent of  $R^1$ .

Claim 98. (new) A process as set forth in claim 76 wherein said conversion of a compound of Formula VII to a compound of Formula VI is effected by hydrolyzing a compound of Formula VII.

Claim 99. (new) A process as set forth in claim 79 wherein said conversion of a compound of Formula VIII to a compound of Formula VII is effected by reacting a source of cyanide ion in the presence of an alkali metal salt with a compound of Formula VIII.

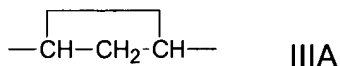
Claim 100. (new) A process as set forth in claim 83 wherein said conversion of a compound of Formula XIII to a compound of Formula VIII is effected by oxidizing a compound of Formula XIII by fermentation in the presence of a microorganism effective for introducing an 11-hydroxy group into said substrate in  $\alpha$ -orientation.

Claim 101. (new) A process for the formation of a compound of Formula IA:



wherein -A-A- represents the group -CH<sub>2</sub>-CH<sub>2</sub>- or -CH=CH-;

-B-B- represents the group -CH<sub>2</sub>-CH<sub>2</sub>- or an alpha- or beta- oriented group of Formula IIIA:



R<sup>1</sup> represents an alpha-oriented lower alkoxy carbonyl radical;

X represents two hydrogen atoms or oxo;

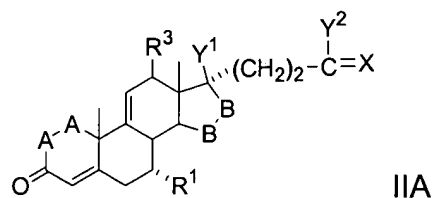
Y<sup>1</sup> and Y<sup>2</sup> together represent the oxygen bridge -O-, or

Y<sup>1</sup> represents hydroxy, and

Y<sup>2</sup> represents hydroxy, lower alkoxy or, if X represents H<sub>2</sub>, also lower alkanoyloxy;

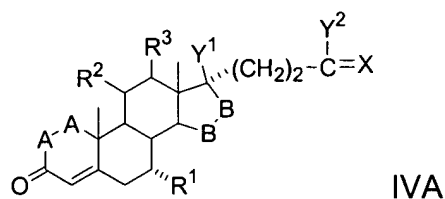
and salts of compounds in which X represents oxo and Y<sup>2</sup> represents hydroxy;

the process comprising converting a compound of Formula IIA to a compound of Formula IA, said compound of Formula IIA having the structure:



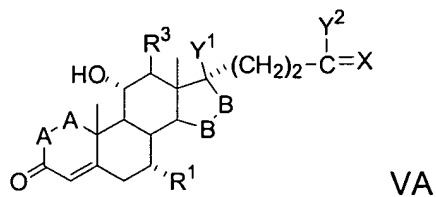
wherein -A-A-, -B-B-,  $R^1$ ,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above;

wherein said compound of Formula IIA is formed by converting a compound of Formula IVA to a compound of Formula IIA, said compound of Formula IVA having the structure:



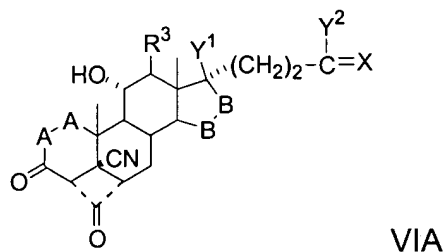
wherein -A-A-, -B-B-,  $R^1$ ,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above, and  $R^2$  represents lower alkylsulfonyloxy or acyloxy;

wherein said compound of Formula IVA is formed by converting a compound of Formula VA to a compound of Formula IVA, said compound of Formula VA having the structure:



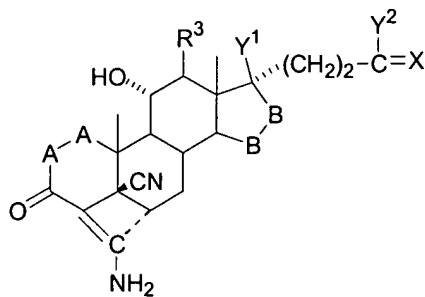
wherein -A-A-, -B-B-,  $R^1$ ,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above;

wherein said compound of Formula VA is formed by converting a compound of Formula VIA to a compound of Formula VA, said compound of Formula VIA having the structure:



wherein -A-A-, -B-B-,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above;

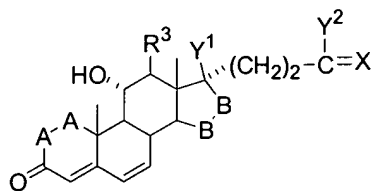
wherein said compound of Formula VIA is formed by converting a compound of Formula VIIA to a compound of Formula VIA, said compound of Formula VIIA having the structure:



VIIA

wherein -A-A-, -B-B-,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above;

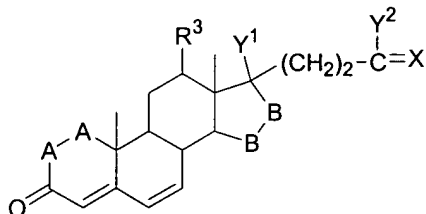
wherein said compound of Formula VIIA is formed by converting a compound of Formula VIIIA to a compound of Formula VIIA, said compound of Formula VIIIA having the structure:



VIIIA

wherein -A-A-, -B-B-,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above;

wherein said compound of Formula VIIIA is formed by converting a compound of Formula XIII A to a compound of Formula VIIIA, said compound of Formula XIII A having the structure:



XIII A

wherein -A-A-, -B-B-,  $R^3$ , X,  $Y^1$  and  $Y^2$  are as defined above.